

**SUBCHAPTER A : GENERAL PROVISIONS**  
**§§329.1-329.19**

**§329.1. Purpose, Scope, and Applicability.**

(a) The purpose of these sections is to implement the provisions of the Texas Water Code, Chapter 28, as it applies to drilled or mined shafts, consistent with the policies of the Texas Water Code as stated in §1.003, §5.012, and §28.030.

(b) This chapter applies to all drilled or mined shafts and associated facilities within the commission's jurisdiction.

**§329.2. Definitions.**

The definitions contained in §28.001 of the Texas Water Code shall apply to this chapter. When used in this chapter, the following words and terms shall have the following meanings, unless the context clearly indicates otherwise:

**Aquifer** - A geologic formation, group of formations, or part of a formation that is water-saturated, water-bearing, and yields water in sufficient quantities to provide a usable supply. Texas aquifers are classified as either major or minor ground-water aquifers and are defined in the most current edition of Texas Department of Water Resources Report No. 238.

**Area of review** - The surface area and the subsurface area extending horizontally not less than 2000 feet in all directions from the maximum extension of a proposed or existing shaft.

**Borehole** - A drilled penetration or an artificial opening in the ground where the depth is greater than its largest surface dimension and is located within 2,000 feet of a new shaft and penetrates a major or minor aquifer.

**Casing** - Material used to seal off strata at and below the earth's surface, and to maintain the structural stability of shaft opening.

**Contaminant** - Any physical, biological, chemical or radioactive material or matter in water.

**Formation** - A body of soil or rock characterized by a degree of lithologic homogeneity that is prevailingly but is not necessarily tabular and is mappable on the earth's surface or traceable in the subsurface.

**Existing shaft**- A shaft constructed before February 4, 1985 (the use of which remains unchanged thereafter), or an abandoned shaft.

**Formation fluid** - Fluid present in a formation under natural conditions.

**Groundwater** - Water below the land surface in a zone of saturation.

**New shaft** - Any shaft which has not been constructed as of February 4, 1985, or any existing shaft or abandoned shaft which is modified or converted to a new purpose for which it was not being used on February 4, 1985.

**Pollution** - The contamination of water or the alteration of the physical, chemical, radioactive, or biological quality of water:

(A) that makes it harmful, detrimental, or injurious to humans, animal life, vegetation, or property, or to public health, safety, or welfare; or,

(B) that impairs the usefulness or the public enjoyment of the water for any lawful and reasonable purpose.

**Resident Inspector** - A person or persons who is designated by the executive director to remain on-site to oversee and inspect the ongoing construction and operation of the drilled or mined shaft.

**Seismic Reflection Survey (Geophysical Survey)** - Any surface based geophysical method which can accurately measure a response at depth of physical phenomena either artificial and/or natural, directly and/or indirectly which is related to the underground geological conditions.

**Shaft** - Any vertically oriented excavation whether constructed by drilling or mining techniques, where the depth of the excavation is greater than its diameter, the excavation penetrates into or through the base of the uppermost water-bearing strata, and the primary purpose of the excavation is the transport of workers and materials to and from a destination, at depth, for purposes of geological studies, access to existing and planned subsurface mine workings, safety, or for ventilation of those workings.

**Surface facilities** - The structures, equipment, appurtenances, and other fixtures associated with the drilled or mined shaft used for storage, processing, or operation, that are above the ground, but not including the shaft collar.

**Stratum or strata** - A bed or layer, regardless of thickness, that consists of generally the same kind of soil, rock or material.

**Test hole** - A drilled and/or cored hole used to determine the type, nature, and characteristics of the subsurface materials and the extent and conditions of the various materials as they exist.

**Uppermost water-bearing strata** - A major or minor aquifer as recognized and described in the most current edition of Texas Department of Water Resources Report 238.

**Well** - An augered, bored, drilled, or driven penetration or an artificial opening in the ground made by digging, jetting, or some other method, where the depth of the well is greater than its largest surface dimension, but the term does not include any surface pit, surface excavation, drilled or mined shaft, or natural depression.

### **§329.3. Severability.**

If any provision of this chapter, or the application of such provision to any person or circumstance, is held invalid, the remainder of this chapter, or the application of such provision to persons or circumstances other than those as to which it is held invalid shall not be affected thereby.

### **§329.4. Construction and Use Prohibited.**

(a) Unless excluded under subsection (b) of this section, the construction, use or operation of a new shaft is prohibited unless authorized by permit of the commission.

(b) The following penetrations are not within the scope of subsection (a) of this section.

- (1) penetrations whose primary purpose is the production of ground water;
- (2) penetrations or boreholes authorized by the commission under the underground injection control program;
- (3) shafts incident to surface mines for oil and gas, iron ore, lignite, coal or uranium recovery regulated by the Railroad Commission of Texas;

(4) sanitary sewer lift stations and otherwise approved water and sewer collection, storage and distribution structures;

(5) penetrations authorized by the Texas Railroad Commission of less than 36 inch diameter whose primary purpose is the ventilation of underground workings or structures;

(6) penetrations authorized by the Commission or the Railroad Commission of Texas whose purpose is the transmission of fuels, concrete slurries, muds, electrical lines, communications, wires or structures, or other utility transmissions, or bulk materials to, or recovery from underground storage facilities or mine workings;

(7) penetrations which would otherwise be defined as shafts, but which, due to local conditions, do not penetrate into or through a major or minor aquifer; and

(8) existing shafts.

(c) The receipt, storage, and disposal on site of any wastes not expressly authorized by permit and not generated by construction, is prohibited.

#### **§329.5. Pre-permit Determination.**

(a) Prior to submission of an application for permit, persons considering the construction of a new shaft which may be defined as a shaft subject to this chapter must contact the executive director and obtain a determination whether or not the proposed activity is subject to this chapter.

(b) The following information must be submitted for this determination.

(1) the proposed or existing location of the shaft;

(2) the activity proposed, and if applicable, the existing activity; and

(3) the proposed or, if applicable, existing depth of the shaft;

(c) An applicant may provide information supporting its position that the new or existing shaft, due to local conditions, will not penetrate into or through an uppermost water-bearing strata for the purposes of this determination.

#### **§329.6. Pre-application Activities.**

(a) Persons who are determined to be proposing a new shaft subject to this chapter must obtain executive director approval of plans for the drilling of an engineering design test hole on center or offset to the shaft and a proposed seismic reflection survey (geophysical survey) for the purposes of site characterization, shaft and seal design, and shaft decommissioning prior to submitting an application for permit. Plans submitted for approval shall contain specific information which will address the following:

(1) test hole - location, drilling, completion, testing, closure, surface cleanup, and mud pits;  
and

(2) seismic survey - location and number of lines, velocity control and accuracy of resolution.

(b) An applicant may provide results of previous exploratory drilling and geophysical surveys to support its position that the engineering design test hole and seismic reflection survey (geophysical survey) are not necessary.

(c) After an appropriate review of the matters submitted under subsections (a) and (b) of this section, the executive director:

(1) may allow the results of previous exploratory drilling and geophysical exploration to be substituted for the engineering design test hole and seismic reflection survey;

(2) will determine the requirements of §329.9 of this title (relating to Procedures for Application) and the area of review;

(3) will determine the fee necessary to compensate the Texas Water Commission for reviewing the application; and

(4) may require mechanical integrity investigation for existing shafts which may be modified or converted to a new purpose.

(d) Persons required to drill an engineering design test hole and/or conduct a seismic reflection survey must first obtain the written approval of the executive director.

#### **§329.7. Test Hole and Seismic Reflection Survey.**

(a) A test hole will not be required to be drilled in conjunction with modification or conversion of use of an existing or abandoned shaft.

(b) Current commission and the Railroad Commission of Texas regulations shall be used to determine requirements for the mud pit construction, surface cleanup and test hole closure requirements.

(c) A seismic reflection survey (geophysical survey) will not be required in conjunction with modification or conversion of use of an existing or abandoned shaft.

#### **§329.8. Application for Permit.**

(a) A technical report prepared either by a registered professional engineer, or by a qualified person who is competent and experienced in the field to which the application relates or who is thoroughly familiar with the operation or project for which the application is made, shall be submitted as part of the application for new permit. At a minimum, the report shall include the following:

(1) A general description and intended purpose of all facilities and systems proposed to be used for, or in connection with, construction and operation of a shaft by mining or drilling.

(2) A surveyor's plat showing the exact location from property lines and survey lines, and giving the latitude and longitude of the shaft and a map(s) showing the location of the shaft for which a permit is sought, and the applicable area of review. Within the area of review, the map(s) must show the number, name and location of all boreholes and other pertinent surface features.

(3) A tabulation of data of all boreholes within the applicable area of review. Such data shall include a description of each penetration's type, construction, date drilled, location, depth, record of plugging and completion, and any additional information the executive director may require.

(4) Maps and cross-sections, as necessary, indicating the general vertical and lateral limits of aquifers within the applicable area of review, their positions relative to the formation, or formations, or stratigraphic units the shaft is constructed to reach.

(5) The text of the report shall discuss the geology, hydrogeology, and ground-water use and development within the applicable area of review; and with respect to the shaft: design, construction, sealing, decommissioning, mechanical integrity, operating procedures and monitoring.

(b) After an appropriate review, the executive director may modify the requirements for application of this section if he finds that additional information is required to evaluate the shaft, or that information required herein is not reasonably available and is not necessary for a full evaluation of the application.

#### **§329.9. Procedures for Application.**

(a) An application is administratively complete when received with all the information as required by Chapter 305 of this title (relating to Consolidated Permits), as appropriate, and this chapter.

(b) Application for a drilled or mined shaft permit shall be submitted with six copies of the completed application including all reports and statements.

(c) The following shall be included in an application for a drilled or mined shaft permit:

(1) the manner in which financial assurances will be attained;

(2) an environmental assessment or environmental impact statement, if required by the Texas Water Code, §28.038;

(3) a decommissioning and closure plan;

(4) a fee, based on estimated cost of application processing and review, of not less than \$10,000 which shall include but is not limited to consultants' fees, lab work, personnel salaries, support services, travel expenses, computer time, and informational services;

(5) a letter from the Railroad Commission of Texas stating that drilling or mining of the proposed shaft and use of the proposed shaft will not endanger or injure any oil or gas formation or significantly limit the potential for future recovery of or exploration for oil or gas; and

(6) a statement of the current status of any litigation involving the project or proposed siting of the shaft.

(d) The executive director will submit to the Railroad Commission of Texas, Texas Department of Health, Texas Air Control Board, Texas Department of Parks and Wildlife and to the Commissioners Court of the affected county a copy of the application including all amendments.

(e) The provisions of Chapter 281 of this title (relating to Applications Processing) do not apply to the processing of new shaft applications under these sections.

#### **§329.10. Permit Required.**

(a) All shafts subject to this subchapter shall be specifically authorized by permit. Shafts serving the same underground working, or built as part of a single comprehensive ore body exploration or evaluation program, may be included in one permit. Additional shafts to be added after the permit is issued may be authorized by permit amendment after a demonstration as in §329.11(b) of this title (relating to Construction Standards for Shafts).

(b) A permit shall include terms and conditions reasonably necessary to protect the major and minor aquifers from pollution. The permit shall include requirements regarding the construction, operation, and decommissioning of a new shaft and corrective action, if necessary, to prevent pollution resulting from inadequately constructed, completed, and abandoned boreholes within the area of review. In the event that, after construction of a new shaft has commenced, evidence indicates that a well within the area of review of a shaft might pose a hazard to a major or minor aquifer, the executive director may prescribe a corrective action plan and compliance schedule to remedy such hazard as a condition for continued construction, use or operation.

#### **§329.11. Construction Standards for Shafts.**

(a) The provisions of this subchapter apply to new shafts within the commission's jurisdiction.

(b) All shafts shall be constructed to prevent migration of fluids that may cause or allow the pollution of aquifers. Construction materials used in each shaft shall be designed for the life expectancy of the shaft.

(c) Appropriate surveys, logs and other tests shall be conducted during the construction of shafts. All surveys, logs and tests shall be interpreted by qualified persons.

(d) Any proposed changes or alterations to construction plans after permit issuance shall be filed with the executive director and approval obtained before incorporating such changes.

**§329.12. Resident Inspector.**

The executive director may designate a resident inspector to oversee all phases of shaft activities. The resident inspector shall monitor compliance with the terms of the permit for all testing, construction, completion, and operation of the shaft and report to the executive director.

**§329.13. Operating Standards.**

- (a) The construction, use, and operation of a new shaft shall be as authorized by the permit.
- (b) All shafts must have mechanical integrity:
  - (1) A lined shaft or lined portion of a shaft has mechanical integrity if there is no significant leak or physical deterioration in the casing, liners, and seals, and if there is no detectable fluid movement through vertical fluid channels adjacent to the shaft which could cause pollution of an aquifer.
  - (2) An unlined shaft, or unlined portion of a shaft, has mechanical integrity if there is no detectable deterioration of the wallrock which could cause pollution of an aquifer.
  - (3) In the event that a lined shaft, unlined shaft, or portion of an unlined shaft may have inflows of ground water, the executive director may require a shaft and mine water management plan be submitted as part of the shaft permit application.
  - (4) Mechanical integrity of the shaft (wallrock or casing, liners, and seals) must be demonstrated as required by the permit, during the life of the shaft and shall be accomplished by a method approved by the executive director.
- (c) Shafts lacking mechanical integrity shall undertake corrective maintenance actions:
  - (1) The permittee shall notify and obtain the approval of the executive director before commencing any corrective maintenance that is necessitated by failure to achieve or maintain mechanical integrity.
  - (2) The notification shall be in writing and shall include plans for the proposed work. The executive director may grant an exception to the requirement for prior written notification when immediate action is required.

**§329.14. Monitoring and Reporting Standards.**

- (a) The permittee shall submit daily construction chronology reports to the executive director and to the resident inspector, if applicable, providing data for each day during the drilling or mining, and casing or lining of the shaft. The data shall be presented in tabular form and shall report date, thickness and lithology penetrated, material settings and volumes, and problems.

(b) Within 90 days after the completion of the shaft, the permittee shall submit an engineering drawing showing the "as built" construction details of the shaft, liners and seals, including the depth, thickness and lithology of the rock units penetrated in constructing the shaft.

(c) The permittee shall, prior to commencing construction, provide written notice to the executive director that a copy of the permit has been filed with the commissioners court for the county where the shaft is located.

(d) The permittee shall notify the executive director in writing of the anticipated first date when the shaft will be used or operated for its stated purpose at least 30 days prior to commencing use of the shaft. Compliance with all pre-operation terms of the permit must occur prior to beginning operations.

(e) The permittee shall notify the executive director within 24 hours of the discovery of any unplanned leakage or other failure of the shaft or associated chambers.

(f) Within 90 days after the completion of a corrective maintenance action, a report shall be filed with the executive director providing the reason for the shaft corrective maintenance action and the details of all work performed and results of remedial action.

**§329.15. Surface Facilities.**

Surface facilities must be constructed, maintained and operated in compliance with applicable permits and chapters governing that facility.

**§329.16. Certification of Construction and Completion.**

Prior to commencing operations, the permittee must certify that the shaft was constructed and completed in compliance with permit requirements.

**§329.17. Additional Requirements.**

(a) The permittee shall keep complete and accurate records of:

- (1) all construction records;
- (2) mechanical integrity testing;
- (3) geotechnical testing;
- (4) water level and water quality testing;
- (5) record of post-construction operations;
- (6) corrective maintenance actions; and



(7) any additional information that the executive director determines might reasonably affect the construction and operation of the shaft.

(b) All records or copies of all records shall be filed on-site and made available for review upon request by a representative of the commission.

(c) The permittee shall retain, for the lifetime of the shaft and for at least 5 years after decommissioning, records of all information concerning the construction, use, and operation of the shaft.

(d) The permittee may be required, prior to commencing operations, to secure and maintain a performance bond or other equivalent form of financial assurance or guarantee, approved by the executive director, to assure:

(1) the costs to the commission of monitoring and of on-site, full-time surveillance; and

(2) the cost to ensure the safe decommissioning and closure of the shaft.

(e) A permittee may satisfy the conditions of subsection (d) of this section by demonstrating as required by §305.153 of this title (relating to Financial Responsibility).

**§329.18. Decommissioning.**

Shaft decommissioning and closure shall be in accordance with plans and specifications approved by the executive director. Decommissioning seals shall be placed in the shaft so as to prevent the migration of fluids into a major or minor aquifer. Shaft seal mix designs shall be compatible with existing lining, if applicable, and adjacent strata.

**§329.19. Appendix A.**

Appendix A is a flow diagram of the procedures to obtain authorization for a drilled or mined shaft.

# Appendix A

